

### REMARKS

Favorable reconsideration of this application is respectfully requested in view of the previous amendments and the following remarks.

By the present amendment, Claim 29 is cancelled. The rejection under 35 U.S.C. § 112, second paragraph, is therefore moot.

Before turning to the prior art, a brief discussion of the photoacoustic detector at issue here is provided. As illustrated in Figs. 2 and 3a, the cantilever-type detector includes a door 3 positioned in an aperture of a panel-like skirt element 4 and mounted so that an inner periphery of the aperture surrounds the door 3. Fig. 1 illustrates the arrangement of the panel-like skirt element 4 and the door 3 between the chambers V and V<sub>0</sub>. The movement of the door 3 in response to the movement of gas on the chamber V helps in the detection of pressure variations, as discussed in the application.

Turning now the claims, Claim 16 is rejected as being anticipated by the 1991 de Paula article.

Claim 16 recites a photoacoustic detector including, *inter alia*, a first chamber suppliable with a gas to be analyzed, a window for letting radiation or light into the first chamber, an aperture, a door adapted to be movable in response to the movement of gas, a frame structure encircling side faces of the door, and means for a contactless measurement of the door movement.

De Paula discloses an optical microphone including a pellicle which is positioned over a duct of a photoacoustic cell. The positioning of the pellicle over the duct is accomplished via a glass fiber attached to the pellicle. As illustrated in de Paula's Fig. 1, the glass fiber is attached to a fiber support of the photoacoustic cell

such that the pellicle is positioned over the duct. In other words, the pellicle is positioned outside the duct in covering relation to the open end of the duct. De Paula discusses that the pellicle may be slightly laterally displaced in relation to the duct so that one side of the pellicle touches the border of the duct. Importantly, de Paula does not disclose mounting the pellicle inside the duct so that the inner periphery of the duct surrounds the pellicle.

The Official Action takes the position that de Paula's duct corresponds to an aperture and de Paula's pellicle corresponds to a door. The Official Action goes on to state that, because the diameter of the duct is nearly equal to the diameter of the pellicle, "if one side of the pellicle is touching the side of the duct the duct is encircling the pellicle". However, as discussed above, de Paula does not disclose that the pellicle touches the side of the duct such that the duct encircles the pellicle. De Paula merely discusses laterally displacing the pellicle (e.g., up or down in Fig. 1) so that the pellicle touches the border of the duct, i.e., without entering the duct. Nowhere in de Paula is it disclosed that the pellicle actually enters the duct.

Moreover, Claim 16 is amended to further distinguish the claim in a manner consistent with the above discussion, and now recites an aperture in communication with the first chamber, and a door being positioned in the aperture and at least on one side mounted so that an inner periphery of the aperture surrounds the door.

For at least the above reasons, Claim 16 is allowable over de Paula, and withdrawal of the rejection of Claim 16 is respectfully requested.

Claim 27 is rejected as being anticipated by Meringdal.

Amended Claim 27 recites a sensor for a photoacoustic detector including a panel-like skirt element serving as a door frame, and a door separated from the

panel-like skirt element by a gap, the door being on only one side mounted on structure of the door frame encircling side faces of the door.

The Official Action takes the position that Meringdal's frame 4 corresponds to structure of a door frame and Meringdal's diaphragm 3 corresponds to a door. Assuming for the sake of discussion that some basis exists for the Official Action's position, the amended claim is not anticipated because the diaphragm 3 is mounted on at least two sides (i.e., at the transition areas 5) to the frame 4. The diaphragm 3 is clearly not on only one side mounted on the frame 4. Meringdal therefore does not disclose a door being on only one side mounted on structure of a door frame encircling side faces of the door, in combination with the other recited features of Claim 27.

For at least these reasons, Claim 27 is allowable over Meringdal, and withdrawal of the rejection of Claim 27 as being anticipated by Meringdal is respectfully requested.

The dependent claims are allowable at least by virtue of their dependence from allowable independent claims. Thus, a detailed discussion of the additional distinguishing features recited in the dependent claims is not set forth at this time.

Early and favorable action with respect to this application is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful

in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: September 16, 2008

By: Peter T. deVore  
Matthew L. Schneider  
Registration No. 32814

Peter T. deVore  
Registration No. 60361

P.O. Box 1404  
Alexandria, VA 22313-1404  
703 836 6620